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DECEMBER, 1984

## DEPARTMENT OF HIGHWAYS' EMPLOYEES' NEWSLETTER

### DIRECTOR'S MESSAGE

It takes money to run the kind of Highway program we ran in 1984, but money isn't enough. It also takes people—people who are dedicated, who work hard, who are willing to serve the public and take pride in a job well done. We have those people at MDOH.

In October, I received a letter from a Michigan couple describing how an MDOH Field Supervisor and his wife, Richard and Norma Losness, helped them when their van broke down at Cascade. "Richard and Norma's hospitality was far above the call of duty," they wrote. After Richard's shift, they made three trips for parts, loaning tools and "moral support" and feeding the family before sending them on their way.

We hear stories like this all the time at MDOH and as Montanans its the kind of thing we're used to. But sometimes we forget just how special our people are. Without them, we couldn't accomplish what we did in 1984.

Its because of our outstanding people, the willingness to work hard and do more than just what's necessary, that I'm pleased to be staying on at MDOH. Its exciting to look ahead to driving the "golden spike" and closing the interstate gaps. Soon we'll be participating in Montana's first-ever developer-financed interchange. Planning is going ahead for a joint point-of-entry

project with Idaho. Significant reconstruction money will begin coming available through the new Reconstruction Trust Fund and this will mean added attention for the primary highway system.

In 1985, we'll be asking the Legislature to authorize maintaining operations at the current level, while expanding several areas. These include field project supervision and lab testing, GVW staffing for new facilities and additional personnel for bridge projects. In Fiscal 1985, we expect to let another \$153 million in construction projects.

Our goal in 1984 was to continue to improve the quality of service to the public. We have done that. In terms of improvements to the system, we accomplished more last year than in the past several decades.

Construction schedules were met for 91% of all projects on an ambitious program with the largest construction budget in our Department's history. We've completed or put under contract 70 of 74 miles of interstate left to be completed and have begun to upgrade those highways that were identified as critically deficient.

Just as important, Maintenance made significant progress in winter sanding, seal coats, striping and signing. GVW increased roving and portable scale work. Portable weighings tripled and citations for violations increased by nearly 2,000. These efforts mean better protection for our highway investment.

I'm confident the Department and the High-

way Commission are in a much better position today, delivering a significantly better highway program to the citizens of Montana. Thank you for your help and all your efforts in meeting our program goals in an efficient and cost-effective way. On behalf of myself, my staff, the Highway Commission, and the District Engineers, thank you for a job we can be proud of as Montanans. Merry Christmas. Happy New Year!



### STATE HIGHWAY AGENCIES REVIEWED

The Southeast Women's Employment Coalition (SWEC) has filed an administrative discrimination complaint with the U.S. Department of Transportation against all 50 State Highway Agencies (SHAs).

The Federal Highway Administration (FHWA) has been charged with conducting reviews of all 50 SHA's by July 1985, pertaining to sex discrimination in filling non-traditional vacancies. The review for the Montana Department of Highways (MDOH) was conducted from December 10-14, 1984 and consisted of a look at the SHA Internal EEO/Affirmative Action Programs.

The review covered the MDOH hiring practices and whether the department is discriminating in hiring females for non-traditional vacancies. The Civil Rights Unit compiled information in response to a SWEC questionnaire provided by FHWA. During the December review, selected MDOH employees were interviewed by the FHWA Review Team.

In the Spring of 1985, the EEO/Labor Compliance Programs will also be reviewed by FHWA to ascertain if contractors are discriminating against females in their hiring practices.

After all 50 SHA reviews have been completed, FHWA Washington Headquarters will make determinations and recommendations after reviewing the data.

### RACE AND SEX HIRING PROCEDURES

The State of Montana like other states and local governments, has committed itself through legislation and an executive order to ending unfairness in employment. To correct the effects of past discrimination, employers may consider race and sex when considering applicants for certain job categories. The procedures are: (1) Entry Level Position—to remedy under-utilization in a specific job category, hiring authorities may select an applicant using race/sex as a basis (depending on the under-representation) as long as the individual meets the entry-level minimum qualifications. This procedure is used even though other applicants may be more qualified for the position; (2) Promotional Positions—to remedy an under-utilization in a specific job category, hiring authorities may ONLY select an applicant using race/sex as a basis when two applicants are essentially equally qualified. Thus, the individual who would remedy the under-representation would be chosen.

Hiring authorities in the Department of Highways who have questions about race/sex hiring procedures should contact the Civil Rights Unit at Helena headquarters.

## PERSONAL COMPUTERS

The Montana Department of Highways has installed IBM personal computers (PC's) in all the district offices, and four bureaus in the main office in Helena. (Data Processing, Bridge, Road Design, Program Development).

Currently, these PC's are being used in the Department for engineering applications, spreadsheet applications, and data manipulation applications using DBASE III. Current users of these applications are the district offices, the Construction Bureau, the Program Development Division, Road Design, the Bridge Bureau, the Personnel Division, the Accounting Bureau, the Word Processing Section, the Print Unit, and the Data Processing Bureau.

Some of the applications are being done through purchased computer packages such as Lotus (spread sheet and plotting of charts) and DBASE III (data base file manipulation). Many other applications have been custom designed by Data Processing and other Highway personnel to handle specific needs. Other software packages currently being researched are CHARTMASTER (chart plotting) and CONTOUR (contour plotting).

One important feature of the PC is its ability to link with the main computer. This allows the districts to access any programs and data which are stored in the main computer system. Data files may in this way be transferred between the two systems. This allows for manipulation of specified data elements without mainframe overhead.

The PC located in the Data Processing Bureau also has a six color pen plotter attached to it. This is being used to produce charts and graphs for many areas. It is also being used to produce the service award certificates.

The PC located in Data Processing will also be connected to a national exchange program (HEEP) through the use of a telephone modem. This will enable the department to exchange programs with many organizations including the FHWA and other states and counties.



**CARINA ZOOK, systems and programming section, Helena, operates one of the Department's personal computers.**

## WINTER TRIP TIPS

Season openers for winter travel lie just ahead—for holiday and winter recreation trips—a situation that has prompted Angela Behr, Safety Specialist of the Montana Triple A to comment, "This timing makes 'open season' for some of winter's deadliest tricks." She cited an example:

"A driver finds himself caught in a wet, sticky snow storm in unfamiliar territory. Words and symbols on roadside traffic signs are completely hidden behind a blanket of clinging snow—good reason for drivers to know the meaning of traffic sign shapes."

Behr then suggests that all drivers recheck their "sign-sense:"

- Octagonal (eight-sided) signs mean only one thing—stop.
- An upside down triangle tells you to yield to other traffic.
- Diamond signs mean caution—something ahead to cause you to slow down.
- A pennant-shaped sign on the left-hand edge of a two lane road marks the beginning of a no-passing zone.
- Rectangular signs indicate traffic regulations and information.
- A round sign and a crossbuck further ahead mark a railroad crossing.
- A pentagonal sign warns that a school zone or school crossing is ahead—be alert for children.
- Shield-shaped signs are route markers.

She also reviewed other winter trip recommendations of the National Safety Council's Committee on Winter Driving Hazards:

*Plan every maneuver well ahead.* Avoid sudden maneuvers in steering or changes in direction. On turns and lane changes, don't oversteer on slick surfaces or you're due for a spin-out.

*Watch for bridges and overpasses ahead.* Ice freezes first and lasts longer on bridges and in shady spots.

If you should hit an unexpected ice patch, don't try to brake, accelerate or steer sharply. Maintain a speed and let your car "roll" through the slippery areas.

*Anticipate hills ahead.* You need to build up enough momentum to get to the top on slippery surfaces. But ease off at the crest! There may be stalled cars on the downgrade side.

*Beware of hydroplaning on wet pavements.* Hydroplaning is the tendency of a car's tires to ride up—to float—on a layer of water covering the road. The tires actually lose contact with the pavement.

Just when hydroplaning occurs depends on the speed, the amount of water, the tires and tire pressures, the weight of the vehicle, and how the vehicle is loaded. It usually affects the front wheels. Steering is lost before the driver realizes it when he tries to turn and can't.

*Go prepared for winter's worst.* Before starting out on a holiday trip, be sure your car's traction equipment for the type of weather that you may encounter is adequate. At the least you should have good tires with good treads. Better yet, use snow tires for better traction in snow. And take along the tire chains if you might reasonably expect to encounter severe snow and ice conditions. Tests by the Council show that chains can provide from four to seven times as much traction on snow and ice as regular tires.

"Safe winter trips," Behr concluded, "require something extra from the motorist. Slower speeds, extra care and common sense will go a long way toward reducing the added hazards of the winter season."



## BILLINGS DISTRICT

by Kelly Nelson

Recent snowstorms have virtually shut-down the construction of Interstate 90 from Lodge Grass to the Wyoming Line. This 23-mile project is being constructed by Beyers General Construction, Inc. from Butte, and Hilde Construction Company from Great Falls. At this time, the grading operation on all 23 miles is basically complete. The contractors have been spreading topsoil and fine grading the roadway surface. With a little luck and some good weather, the contractors could finish seeding this fall.

Two feet of a special sand base material has been put in place, and Empire Sand and Gravel from Billings, sub-contractor for Beyers General, has begun placing Foamix Asphalt base material, which at present is 2 percent complete. The contractor has been experiencing difficulty in the method of producing and laying this material. The amount that has been completed, though, will give the Department and the contractor the opportunity to review the process this upcoming winter, and improve on it so that a more uniform and better product can be produced when construction gears up again next spring. Foamix, being so new and experimental, has made it exciting for all working with it. It goes along with the national commitment to innovation in the engineering field.

The Billings District would like to extend an invitation to all construction employees throughout the state to schedule a trip to our district sometime in late spring or early summer of 1985 to see this new method of surfacing. We are very optimistic and feel it will definitely have a place in the future of road construction for the State of Montana.

## PHOTO UNIT TIPS

Have you ever squinted and strained through an entire slide presentation because you just couldn't read what was on the screen? Communication intended by the presenter can be easily lost due to hard-to-read slides.

One of the biggest mistakes a person can make is to think that legibility in one form means legibility in another. For example, a page that is easy to read in a book will not be easily read on a screen thirty feet away.

When preparing title slides, one basic rule to follow is simplify. When using charts and graphs, eliminate the small detail that is not important. If you cannot eliminate material, then use several slides. When preparing lettering, use a typewriter with bold type, rub on letters, Kroy-type letters, or letters set at the Publications and Graphics Division.

When preparing lecture slides, be sure to contact the Photo Unit for assistance. We can help you with the proper letter size for title slides and prepare easy to read colorful slides.

## MISSOULA DISTRICT

by Bonnie Sedita

During this past summer, the Missoula Maintenance Area, under the supervision of Rusty Wrigg, has initiated a comprehensive Bridge Repair Section. The first big step was to purchase many pieces of specialized equipment such as a concrete saw, sandblaster, concrete chipping guns, etc. The second step is the on-going training of former bridge construction employee Dick Price, who is now working for Maintenance and who is in charge of the Bridge Repair Section. It is anticipated that by next year the Missoula Maintenance Area will have the capability to undertake most of bridge cleaning, repair and rehabilitation.

Engineering Services has seen many new developments since the 1st of the year. Certain personnel have been added to enhance Engineering Service's overall capabilities to support construction and maintenance within the District. Design has seen the addition of Dennis Dietrich, Loran Frazier, and Ace Hoang. Dennis and Ace came over from Helena and Loran transferred in from Great Falls. Through these new people, design will be better able to meet the increased work requirements of new construction projects. Utilities and OAC were perceived as needing increased supervision, thus provisions for an Assistant Utility Agent and a R/W Representative were made. The Utility position was filled through the promotion of Margaret Burke. The R/W Representative has been advertised but as of yet is unfilled. Jim Weaver, Engineering Services Supervisor, has gained a new remodeled office as a result of the expansion of his division.

Other color services available from the Photo Unit are as follows:

- Color prints from negatives
- Slides from negatives
- Copy negatives (a negative made from a color print)
- Copy slides (a slide made from a color print)
- Duplicate slides (a slide made from another slide)
- Title slides

Before spending time shopping around for a photographic service, whether color or black and white, check first with the Photo Unit.



## GLENDIVE DISTRICT

by Patty Zimmerman

The Communications Bureau has finished installing the new high band radio system in the Glendive Division. With Miles City being the first Division in the Glendive District to receive the new system and now with Glendive being added we are looking forward to having Wolf Point added on next year. Coordinating the change-over has been difficult, but we are already seeing some definite benefits.

Two additions have been added to the Miles City Headquarters Complex—a 36'x40' stockroom and a 17'x20' extension to the Welding Bay. All the work was done by contract with A & E Funds except for perfataping, painting and installation of shelving in the stockroom. The process of moving supplies to the new stockroom is underway.

Another project that has been let to contract is new siding and a new roof on the Hillside Section House 45 miles north of Miles City.

Truman A. Bovee, III, is the new Sectionman at Beaverslide, replacing Phil Owens, who retired in August. Truman has been employed with the Department of Highways for ten years and at the time of his promotion, was an Equipment Operator II headquartered out of Miles City.

MERRY CHRISTMAS and a HAPPY NEW YEAR from all of us in the Glendive District!



## LETTERS

Dear Sirs:

I just want to let you know that I received my purse today in the mail. I had accidentally left it in a rest station on Interstate 90, west of Billings, on November 2, 1984, and it was found by your caretaker, Art Waltermann, that same morning. He called us that evening and then sent it to me, and it arrived today. I just can't tell you how thankful I am that such an honest man found it. Mr. Waltermann asked us to notify you people of its safe return. We are indeed so grateful to everyone who knew about this and did what they could. Thanks so very much.

Sincerely,

Mrs. Jessie E. Colter  
Kalispell, Montana

## NEW TESTING TRAILERS

The Materials Bureau has been extensively involved in implementing anti-rutting specifications since 1983. The initial concept was to evaluate specialized "in-place" bituminous mix testing for conformance with the "new" anti-rutting specifications and to provide more information about bituminous pavement behavior.

As a result of the above criteria a need for an on the project site evaluation of bituminous mix properties was established. The need for a Marshall Field Testing Laboratory with the associated equipment was demonstrated to the FHWA in January of 1984 by the Department. The FHWA authorities approved funding for the listed program on June 27, 1984 under: IR-F OOB(6), Marshall Field Test Trailer and Equipment.

Since the authorization was given, the Materials Bureau, Districts and Purchasing Bureau have been involved in designing, specifying, procuring, reviewing and approving the equipment which will be used to evaluate the properties of the plant mix. The equipment will be able to monitor stability, voids, flow, density, maximum rice density, percent asphalt and grading of extracted aggregate.

A proto-type unit was awarded to Gelco Space Corporation which is involved in design and construction of modular homes and trailers. Presently, the test equipment is being installed within the approved proto-type unit at the Materials Bureau. The unit is available for general review by any interested employees.

The scope of work has involved the awarding of 84 line items of specialized equipment and the procurement of 15 additional test trailers. The complexity of the operation has been one of communication, coordination and correction with the various contractors and equipment suppliers. As problems have occurred, the Bureau has responded by coordinating with the District office and Purchasing Bureau a solution satisfactory to all parties. The suppliers and contractors at this time have been most cooperative.

The 5 districts and area headquarters person-



**MARSHALL field test trailer**

nel have been involved in acceptance and warrant-transfer claims to the numerous suppliers. Trailer equipment involves 84 items for each of 11 locations. The errors in delivery have been minimal. The districts are now involved in the final sorting of all equipment with the Materials Bureau. The Materials Bureau in Helena appreciates the effort made by all District personnel involved in the project.

A production schedule has been established for the remaining fifteen units; all units should be delivered by February 28, 1984. Acceptance of the remaining units will be jointly administered by the District personnel. Each unit will have an insurance value of \$60,000 per unit. This includes the trailer, all testing equipment and 11 coring machines.

The Materials Bureau will be responsible for training 11 field personnel in the proper operation of the equipment and test procedures. These 11 personnel will in turn act as trainers in their respective districts. This training is hoped to be completed by no later than mid-January.

During the coming year fine tuning of test procedures, verification testing, and other problems with the program will be solved. Evaluation of the basic scope of the project can then be made and, hopefully, bituminous pavement problems involving Marshall design can be more properly evaluated.

## BACK INJURY PREVENTION PROGRAM

Few occupational health problems present such on-going financial repercussions for today's employers as that of occupational back problems. And few discussions stir up as much controversy as those centering on the steps necessary to eliminate the problem.

Baseline information concerning actual Department of Highways experience over the past five years indicate back injuries account for approximately 22% of *FREQUENCY*, and 21% of the *TOTAL COSTS* of all injury cases. We have averaged about five back injury claims per month, with the average cost per back injury claim being \$1,993. Over-exertion accounts for the greatest share of frequency and for the largest share of cost expenditures.

The first concentrated effort in back injury reduction within the Department began last June with the assistance of Bruce and Chris Lepore of Back Dynamics Institute. They identified and analyzed existing procedures and practices in the workplace as they related to the possible causes of back injuries. An educational program was developed, which recommended alternatives, both environmental and in work practices. This program was conducted statewide to employees during the Fall Safety Seminar. Approximately 800 employees participated in the Back Injury Prevention Program. The major emphasis of the presentations included the need for individual responsibility, anatomy, physiology and kinesiology of the back, posture and on-the-job and off-the-job situations relating to back injury prevention.

Surveys will be conducted at intervals of three, six, nine and twelve months. Current loss information will be compared against the original profile to determine the program's effectiveness in terms of reduced losses and improved safety performance.

## RETIREMENTS

Recent retirees with over 25 years of service with the Department include: Donnell G. Merrill, Lima, 34 years, 10 months; Philip H. Owens, Miles City, 33 years, 10 months; John D. Mitchell, Missoula, 33 years, 6 months; Calvin S. Blatter, Great Falls, 29 years, 9 months; Jacob J. Giem, Helena, 26 years, 7 months; M. Dean Knapp, Billings, 26 years, 6 months; and James M. Young, Billings, 25 years, 5 months. Other recent retirees are: Joseph A. Rege, Great Falls, 23 years, 3 months; Peggy M. Dolan, Helena, 23 years; Elmer L. Speer, Helena, 20 years, 7 months; Robert W. White, Troy, 16 years, 10 months; Glen M. Derrickson, Kalispell, 15 years, 6 months; and Bruce W. Griffith, Grass Range, 13 years, 3 months.

